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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,599	04/04/2001	Timothy B. Robinson	42155/RJP/E264	3709

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EXAMINER
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JUNTIMA, NITTAYA

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/825,599

Applicant(s)

ROBINSON ET AL.

Examiner

Nittaya Juntima

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/14/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. Figures 1a-1d should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:

- the relevant U.S Patent application numbers/U.S. Patent numbers of the applications listed on page 1 should be provided.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 4 and 8 are objected to because of the following informalities

- in claims 4 and 8, ll 4, "the" should be changed to "a."

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Wittman (USPN 4,595,802).

Per claim 1, as shown in Fig. 2, Wittman teaches a method for optimizing signal transformation from a twisted pair transmission line (a two-wire line) to a combination transmitter (a transmitter connecting to transmit port 29) and receiver (a receiver connecting to a receive port 30), the transmitter having a transmit output pair port (a transmit port 29) for transmitting signals onto the switching office over the twisted pair transmission line and the receiver having a receive input pair port (a receive port 30) for receiving signals from the switching office over the twisted pair transmission line, comprising:

coupling a transformer (18) between the twisted pair transmission line and each of the transmit output pair port (29) and the receive input pair port (30), the transformer having a coil (19a and 19b joined together as one by capacitor 28) across the twisted pair, a transmit coil (21a) across the transmit output pair port (29), and a receive coil (21b) across the receive input pair port (30). See col. 2, ll 44-68. See also col. 1, ll 9-17, Fig. 1, and col. 2, ll 10-13.

Further, it is inherent that a transfer ratio between the transmit coil and the coil across the twisted pair must be optimized for transmitting signals and a transfer ratio between the receive

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coil and the coil across the twisted pair must also be optimized for receiving signals in order for the hybrid circuit 38 to be effectively receiving and transmitting signals, col. 2, ll 63-68.

Per claim 2, since signals are received and transmitted using a transformer 18 of Fig. 2 (col. 2, ll 44-68), it is inherent that the transfer ratio between the transmit coil and the coil across the twisted pair and the transfer ratio between the receive coil and the coil across the twisted pair must be optimized by optimizing transmit coil to coil across the twisted pair turns ratio, i.e.  $21a : (19a+19b)$ , and receive coil to coil across the twisted pair turns ratio, i.e.  $21b : (19a+19b)$ , to maximize respective transmit path and receive path signal to noise ratios because line impedance is matched by the transformer (18), therefore, line interference/noise is minimized.

Per claim 3, Wittman further teaches that the twisted pair transmission line (a two-wire line) is a telephone line having a tip line (a tip wire 12) and a ring line (a ring wire 11). See Fig. 2 and col. 2, ll 10-14 and 44-49.

Claims 5-7 are apparatus claims corresponding to method claims 1-3, respectively, and therefore are rejected under the same reason set forth in the rejections of claims 1-3, respectively.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wittman (USPN 4,595,802).

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Per claim 4, Wittman also teaches that a receive coil:transmit coil ratio is 1 (winding 21a and winding 21b are equal, col. 2, ll 15-17).

However, Wittman does not teach that the transmit coil to coil across the twisted pair turns ratio is designated wt:1 and the receive coil to coil across the twisted pair turns ratio is designated wr:1.

However, it would have been obvious to one skilled in the art to modify the teaching of Wittman to include that the transmit coil to coil across the twisted pair turns ratio is designated wt:1 and the receive coil to coil across the twisted pair turns ratio is designated wr:1 as long as it does not produce any unexpected results and such modification involves only routine skill in the art.

Claim 8 is an apparatus claim corresponding to method claim 4, and therefore are rejected under the same reason set forth in the rejections of claim 4.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima  
November 29, 2004

*NJ*



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